SONY

3-800-895-21(1)

Digital Micro Recorder

Operating Instructions

NT-2

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Owner's Record

The serial number is located inside the battery compartment and the model number is located at the bottom. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. NT-2

Serial No._____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture. To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Information

For Customers in the USA

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, used, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

IN NO EVENT SHALL SELLER BE LIABLE FOR ANY DIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE, OR LOSSES OR EXPENSES RESULTING FROM ANY DEFECTIVE PRODUCT OR THE USE OF ANY PRODUCT.

Features

❑ **Compact digital stereo tape recorder**
High-fidelity digital sound realized by the NT (Non-Tracking) format is available with simple operations.

❑ **Stamp-size cassette tape**
The tiny NT (Non-Tracking) cassette tape is capable of up to 120 minutes of playback/recording.

❑ **Runs on one Size AA (LR6) battery**
One alkaline battery provides power for about 5 hours of continuous recording or about 3 hours of continuous playback.

❑ **MEMORY REVERSE function**
You can record or play back both sides of a cassette continuously without any muting of sound.

❑ **Automatic Gain Control (AGC)**
The digital AGC adjusts the recording level automatically. (The recording level can also be adjusted manually.)

❑ **Date function**
The unit stamps the date and time during recording. Whenever you play back a recording, you can see when it was recorded.

❑ **Remote control**
You can play back a tape using the remote controller equipped with the stereo headphones.

Unpacking

Digital micro recorder NT-2
AC power adaptor AC-NT2
Line cable
NT cassette tape (NTC-60, 60-minute)
Cleaning cassette NTC-10CL
Stereo headphones with a remote controller
Lithium battery (CR1220)
Stereo microphone
Carrying case

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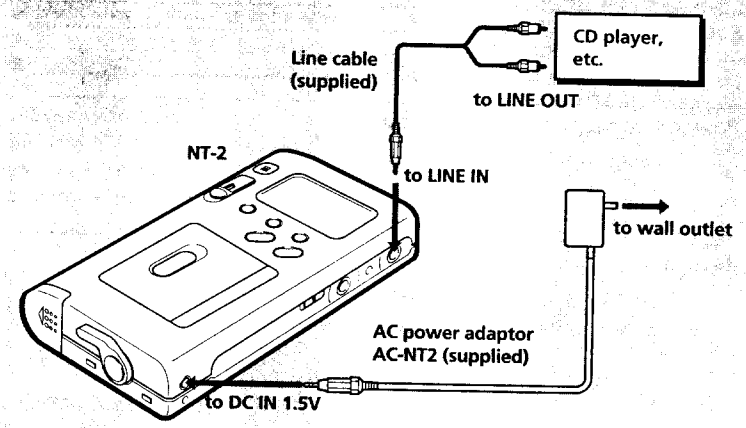
Connecting to AC power and a CD player, etc.



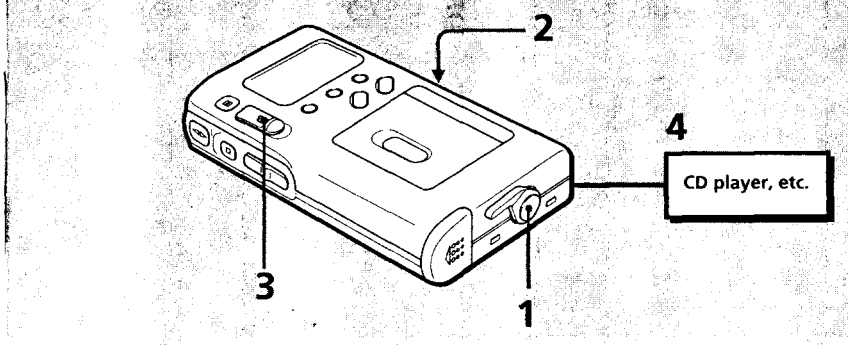
The recorder is operable on AC power using the AC power adaptor (supplied).

When the sound source has a stereo-mini type LINE OUT jack

Use a line cable RK-G136GS (stereo miniplug ⟷ stereo miniplug, not supplied). For example, portable CD players have this type of LINE OUT jacks.

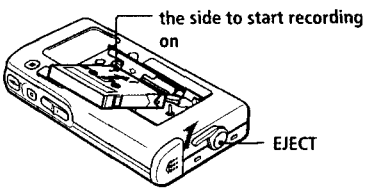
Using on a dry battery → page 9

Recording from a CD, etc.



1 Slide EJECT upward to open the cassette holder and insert the tape.

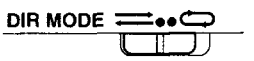
Slide in the tape in the direction of the arrow until it clicks.



2 Select DIR MODE (direction mode).

⇄: To record on one side facing the cassette holder (FWD)

⇆: To record on both sides (from FWD to REV)



3 Start recording.

While pressing the red button, slide it.

4 Play the CD, etc.

To stop recording

Press ■.

To suspend recording

Press ❚❚. To resume recording, press ❚❚ again.

To change the recording side

Press ◀▶ twice and press ■.

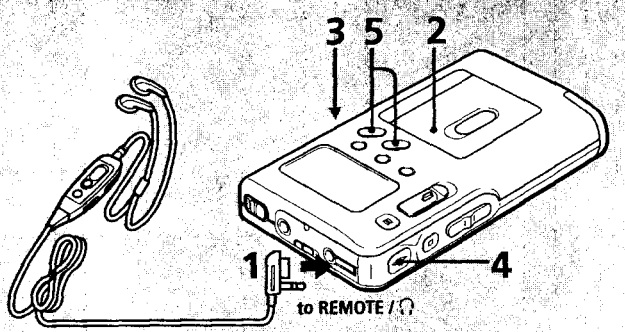
Once you open the cassette holder, the side to start recording will change to the side facing the cassette holder.

To monitor the sound being recorded

Connect the headphones.

Recording with a microphone → page14

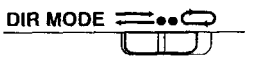
Listening with the headphones



1 Connect the headphones.

2 Insert the tape with the side you want to listen to facing the cassette holder.

3 Select DIR MODE (direction mode).



⇄: To play one side
⇆: To play both sides*

* The recorder plays both sides three times continuously and then automatically stops for protecting the tape.

4 Play the tape.

5 Ajust the volume.

Operation while playing back

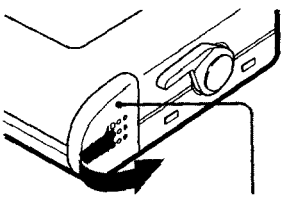
To	Press
stop playing	■
play the opposite side of a tape	◀▶
suspend playback	❚❚
fast-forward	■ (stop) and then FF
rewind	■ (stop) and then REW

Listening with a stereo system → page 20

Using on a dry battery

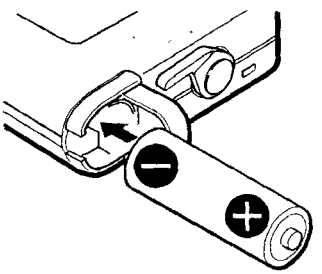
Install an Size AA (LR6) alkaline battery.

1 Open the battery compartment lid.
While pressing the lid, slide it in the direction of the arrow.



Battery compartment lid

2 Insert the battery with the – side first.



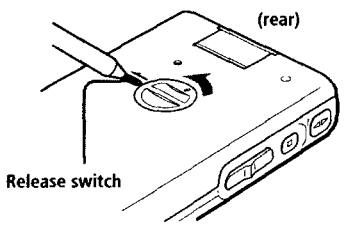
When the battery becomes weak
The ⌫ indication flashes in the display. Replace the battery with a new one, otherwise the battery will go dead and you cannot operate this unit.

Battery life
You can record continuously with a new alkaline battery for about 5 hours, or play back for about 3 hours.

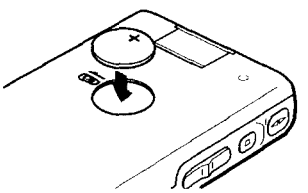
Installing a lithium battery

To operate the built-in clock, install the lithium battery (CR1220, supplied).

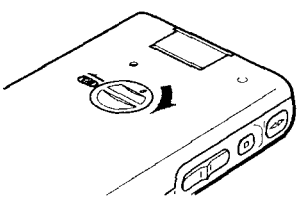
1 **While sliding the release switch with a pointed object, rotate the lid in the direction of OPEN.**
The lid is removed.



2 **Install a lithium battery with the + side facing up.**



3 **Replace the lid, and rotate it in the direction of CLOSE until it clicks.**



Lithium battery life

Replace the lithium battery once about a year. When the battery becomes weak, the date and time display may flash or the clock may lose time. Note that the built-in clock normally loses about 2 minutes a month.
Replace the battery only with one of the same type and rating.

After replacing the lithium battery

If necessary, reset the clock (page 12). If you use the recorder without resetting the clock, the correct date and time will not be recorded with the recording.

Notes on lithium battery

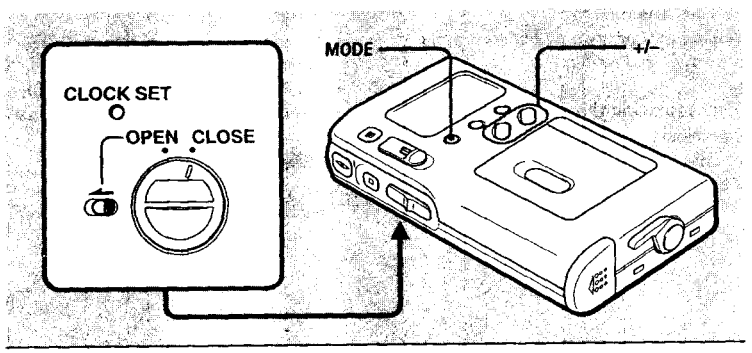
- Keep the lithium battery and the recorder out of the reach of children. Should the battery be swallowed, immediately consult a doctor.
- Wipe the battery with a dry cloth to assure a good contact.
- Be sure to observe the correct polarity when installing the battery.
- Do not hold the battery with metallic tweezers, as a short-circuit may occur.

WARNING

Battery may explode if mistreated.
Do not recharge, disassemble or dispose of in fire.

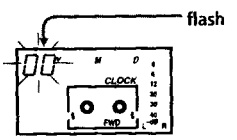
Setting the clock

Set the clock before starting any recording operations to stamp the date and time.
After connecting to the power source, set the year (Y), month (M), date (D), hour (H), minute (M) in this order. To go to the next step, press MODE. To enter the digits, press + or –.



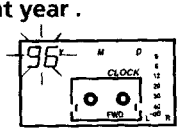
1 While the recorder is not operating, press CLOCK SET for about one second with a pointed object.

The digits of the year flash.



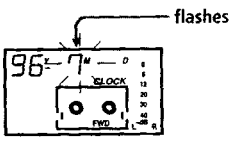
2 Press + or – to enter the current year .

To change the digits rapidly, keep pressing + or –.



3 Press MODE.

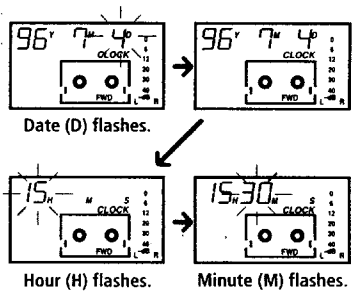
The year you set is stored in the memory and the digit of the month starts flashing.



4 Repeat steps 2 and 3 to set the month, date, hour, and minute.

The display changes as illustrated.

The time is displayed in the 24-hour system.



5 After setting the minute, press MODE.

The clock starts operating, and the current time (hour, minute, and second) is displayed.

To set the time precisely, press MODE at the same time as a time signal.

If you make a mistake while setting the clock

Press CLOCK SET to release the setting mode, and start setting the clock again from step 2. You can skip the correct digits by pressing MODE and go on to the digits you want to reset.

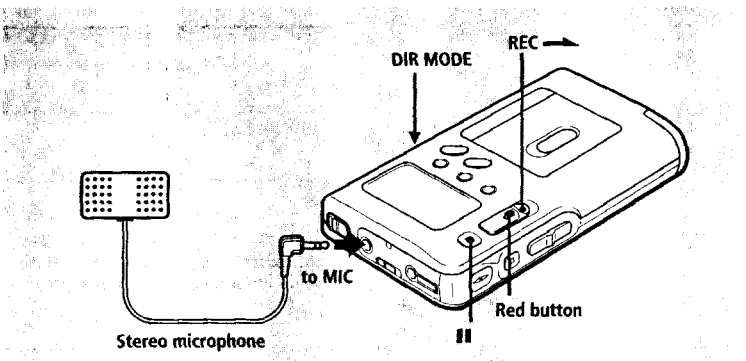
If the clock loses time

Adjust the clock again according to the steps above.

We recommend you to adjust the clock periodically to stamp the accurate date and time.

Recording with a microphone

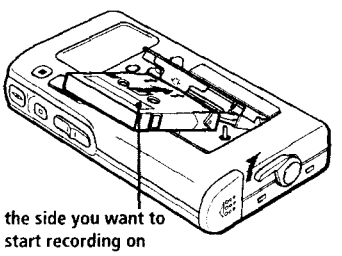
Make a recording using the stereo michrophone (supplied).



1 **Connect the stereo microphone (supplied) to MIC.**

2 **Slide EJECT upward to open the cassette holder and insert the tape.**

Slide in the tape in the direction of the arrow until it clicks.



3 **Select DIR MODE (direction mode).**

⇄ : To record on one side facing the cassette holder (FWD)

⇆ : To record on both sides (from FWD to REV)

4 While pressing the red button on REC, slide REC.

Recording starts.
This unit adjust the recording level automatically.

To stop recording

Press ■.

To suspend recording

Press ❚❚. "PAUSE" and the tape counter appear in the display alternately. To resume recording, press ❚❚ again.

To adjust the recording level

Recording level adjustment mode has been preset to SPEECH. To change the mode to MUSIC or adjust the recording level manually, refer to "Adjusting the recording level" (page 17).

To start recording quickly

After finishing step 3, slide REC while pressing the red button after pressing ❚❚. The recorder enters recording standby mode. When you want to start recording, press ❚❚.

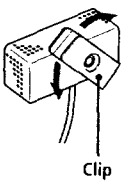
When you set DIR MODE (direction mode) to ⇄ (both sides)

You can play the tape recorded with the NT-2 smoothly without a break when the tape changes from the FWD (forward) side to the REV (reverse) side ("Memory reverse function", page 36). If you start recording less than 10 minutes before the end of the FWD side, "memory reverse" may not function.

→ Recording with a microphone

Using the stereo microphone (supplied)

You can attach the microphone to your clothing (for example, your tie or collar). The clip rotates as illustrated.

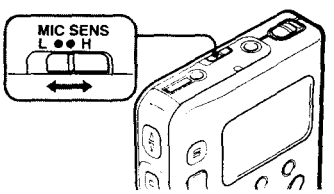


Clip

To adjust the sensitivity of the microphone

Set the MIC SENS switch to H (high) or L (low) according to the recording condition while monitoring with the headphone.

H: To record a remote or quiet sound
L: To record a close or loud sound



When the following indications flash "REC" and "PROTECT"

The cassette is record-protected. Release the record-protect or insert a new cassette. (pages 27, 33)

"REC" "PROTECT" and "◄ REV"

The REV side of the cassette is record-protected.

"REMAIN"

The remaining time of the tape (of one side) is less than about 4 minutes. In this case, you cannot change the DIR MODE (direction mode).

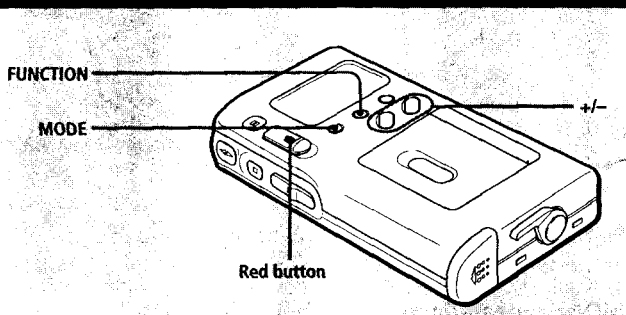
To mix sound from two audio sources

Connect the microphone to the MIC jack and connect another piece of audio equipment to the LINE IN jack of the recorder. You can record the sound from both sources mixed together. In this case you cannot adjust the sound balance.

Adjusting the recording level

Sound levels of the source are automatically adjusted when recorded on the tape. You can select the automatic adjustment mode according to the sound source.
If you want to control the recording level more precisely, you can adjust the level manually.

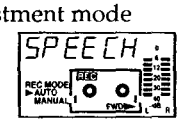
Selecting the automatic adjustment mode



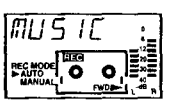
1 **Press FUNCTION in recording or recording stanby mode.**
In other modes, press FUNCTION while pressing the red button.

2 **Press MODE repeatedly to select SPEECH or MUSIC.**
Each time you press MODE, recording level adjustment mode changes as follows:

→ SPEECH → MUSIC → MANUAL →



SPEECH: To record conversation, etc.
MUSIC: To record music



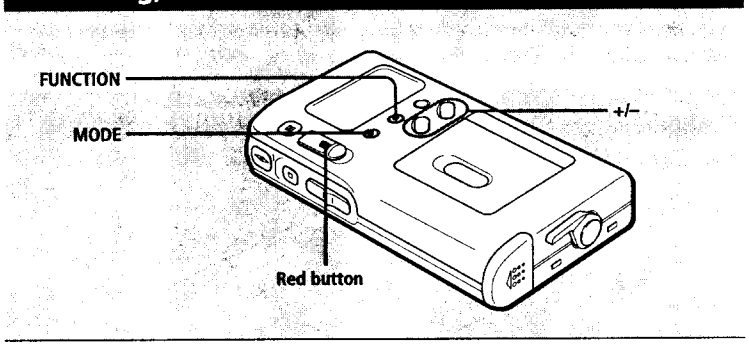
3 **Press FUNCTION.**
Recording level will be adjusted automatically.

Note

Due to the kind of the source or changes in the sound level, automatic adjustment may not control the recording level precisely or noise may occur. In these cases, control the recording level manually. (page 18)
The recorder memorizes the recording level adjustment mode even after recording.

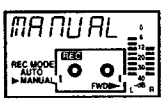
→ Adjusting the recording level

Adjusting the recording level manually (Manual recording)



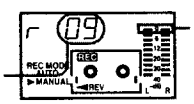
1 **Press FUNCTION in recording or recording stanby mode.**
In other modes, press FUNCTION while pressing the red button.

2 **Press MODE repeatedly to select MANUAL.**



3 **Press FUNCTION.**
The recording level control is switched to manual control.

4 **While pressing the red button, press + or – to adjust the level.**

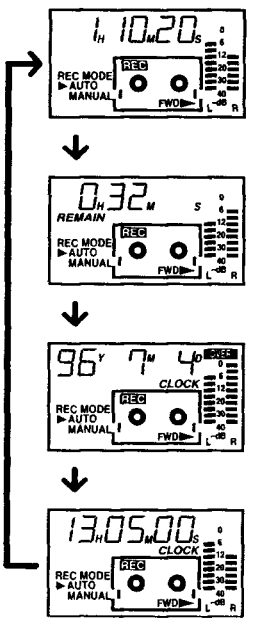


As the digits increase, the level increases (minimum: 0, maximum: 30).

Adjust the level so that the top bar lights once in a while.

Displays while recording

Each time you press the MODE button while recording, while in the standby mode, or right after the recorder has stopped recording, the display changes as follows:



Tape counter
Counted length of the tape, not elapsed time.

Remaining time
This shows you can record for 32 more minutes.

Year, month, and date
This shows today is July 4, 1996.

Hour, minute, and second
This shows it is just 1:05 pm now. (The clock operates in 24-hour system.)

Remaining time display

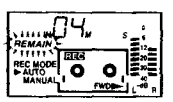
Playback mode determines how the remaining time is counted. It takes about 10 seconds after recording has started untill the remaining time is displayed.
The displayed remaining time may differ a little from the actual time.

To reset the tape counter

Press the COUNTER RESET button while the tape counter appears. The tape counter indicates "0H00M00S".

When "REMAIN" flashes in the display

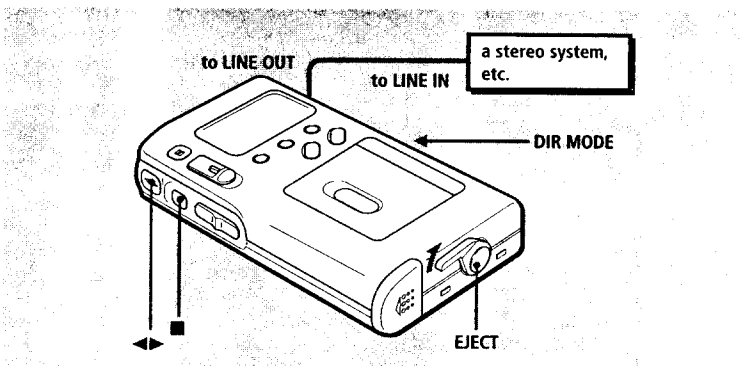
The remaining time of the tape is less than about 4 minutes.



When "REMAIN" flashes in the display, you cannot change DIR MODE (direction mode).

Listening with a stereo system

Connect another piece of audio equipment such as a stereo system.



1 **Connect the line cable (supplied) to the LINE OUT jack of the recorder, and then connect the other side of the cable to the LINE IN jack of your stereo system.**

2 **Insert the tape with the side you want to listen to facing the cassette holder.**

3 **Select DIR MODE (direction mode).**

⇄ : To play only one side.

↻ : To play both sides continuously*.

* The recorder plays three times continuously and then automatically stops for protecting the tape.

4 **Press ◄►.**

Playback starts.

5 **Adjust the volume on the stereo system.**

Note

- If you connect the line cable to your stereo system before connecting it to the recorder, noise may be heard.
- While the headphones are connected to the recorder, the playback volume from the headphones may be lowered if you connect a stereo system to the recorder.

Operation while playing back

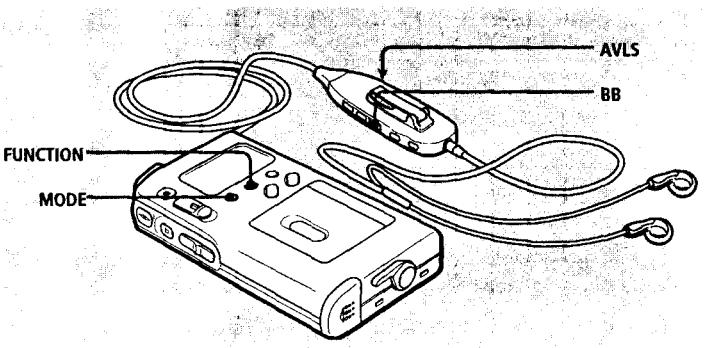
To	Press
stop playing	■
play the opposite side of a tape	◄►
suspend playback	II
fast-forward	■ (stop) and then FF.
rewind	■ (stop) and then REW.

To listen to a tape in a car

Use the car battery cord DCC-E215HG or DCC-E215 (not supplied) and the car connecting pack CPA-8 (not supplied). Connect the DC IN 1.5V jack of the recorder to the cigarette lighter socket of the car with the car battery cord. And connect the LINE OUT jack of the recorder to the cassette car stereo with the car connecting pack.

Using the playback features

When listening with the headphones, you can select the sound quality.



Emphasizing the bass (BASS BOOST feature)

The BASS BOOST feature intensifies low frequency sound for richer bass reproduction.

1 **Press FUNCTION.**

2 **Press MODE to select BASS 1 or BASS 2.**
Each time you press MODE, the setting changes as follows:
"OFF" →"BASS 1"→"BASS 2"
BASS 1: slight emphasis of the bass
BASS 2: strong emphasis of the bass

3 **Press FUNCTION to end selection.**

To select with the remote controller

Press the BB button.
Each time you press the button, the selection changes: "OFF"→"BASS 1" →"BASS 2".

Note

When you connect any cord to the LINE OUT jack, the BASS BOOST does not work.

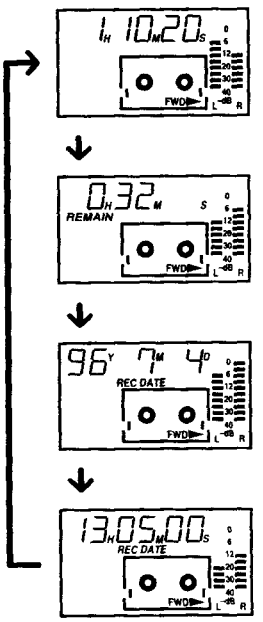
Protecting your hearing (AVLS)

The AVLS (Automatic Volume Limiter System) function allows you to limit the maximum volume of the recorder to protect your ears.

Slide AVLS on the remote controller to ON.
The volume does not exceed over "P 23" (maximum "P 30") when using AVLS function, even if you attempt to turn the volume up higher.

Displays while playing

The recording time and date stamped on the tape is displayed during playback. Each time you press the MODE button, the display changes as follows:



Tape counter
Counted length of the tape, not elapsed time

Remaining time
This shows you can play for 32 more minutes.

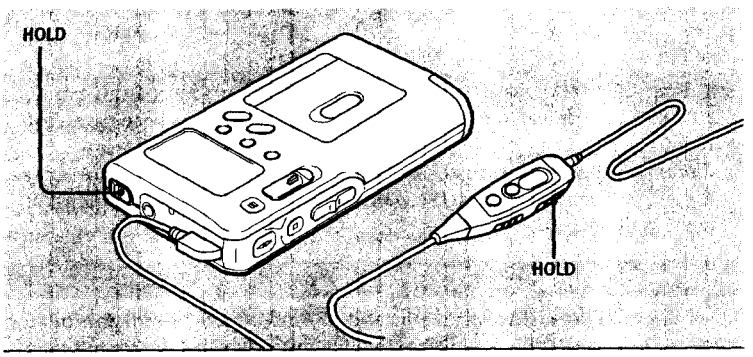
Year, month, and date recorded
This shows the recording was made on July 4, 1996.

Hour, minute, and second recorded
This shows the recording was made at just 1:05 pm.

To reset the tape counter
Press the COUNTER RESET button while the tape counter appears. The tape counter indicates "0H00M00S".

Locking the controls (Hold function)

To prevent the buttons from being accidentally operated, use the Hold function.
It can lock the controls while you are walking with the recorder in your bag or pocket. Even when this function is activated, you can still reset the tape counter and change the display.

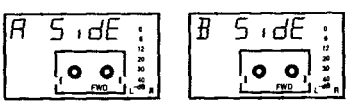


Slide HOLD in the direction of the arrow.
The HOLD switch on the recorder works to lock the controls on the recorder.
The HOLD switch on the remote controller works to lock the controls on the remote controller.
To release the Hold function, slide back HOLD in the opposite direction of the arrow.

Knowing the side of a tape (A/B side checking function)

Before starting operation, you can check which side of the tape in the recorder is to be played or recorded.

While the recorder is not operating, press ■ for a while.
" A Side" or "B Side" appears in the display.



Precautions

On the AC power adaptor

- Use only the AC-NT2 AC power adaptor (supplied). Do not use any other AC power adaptor.

Polarity of the plug

- The recorder is not disconnected from the AC power source as long as it is connected to the wall outlet, even if the recorder itself has been turned off.
- If you are not going to use this recorder for a long time, be sure to disconnect the power supply (AC power adaptor, dry battery). To remove the AC power adaptor from the wall outlet, grasp the adaptor plug itself: never pull the cord.

On installation

Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

On handling

Do not drop or hit the unit. Doing so may cause a malfunction in the unit.

On battery

Incorrect battery usage may lead to leakage of battery fluid or bursting batteries. To prevent such accidents, observe the following precautions:

- Install the + and – poles of the battery correctly.
- Do not try to recharge the battery.
- When the unit will not be used for a long time, be sure to remove the battery.
- If a battery leak should develop, carefully and thoroughly wipe away battery fluid from the battery compartment before inserting a new one.
- Batteries and metal should not be put together. If the + and – poles of the battery touch metal, a short circuit may result.

On tape

- Keep an NT cassette tape out of the reach of children. Should the tape be swallowed, immediately consult a doctor.
- **On cassettes longer than 90 minutes**
  The use of cassettes longer than 90 minutes is not recommended except for long continuous playback.

On the headphones

Road safety

Do not use headphones while driving, cycling, or operating any motorized vehicle. It may create a traffic hazard and is illegal in some areas. It can also be potentially dangerous to play your recorder at high volume while walking, especially at pedestrian crossings. You should exercise extreme caution or discontinue use in potentially hazardous situations.

Preventing hearing damage

Avoid using headphones at high volume. Hearing experts advise against continuous, loud and extended play. If you experience a ringing in your ears, reduce the volume or discontinue use.

Use the AVLS function to avoid excessive pressure to your ears.

Caring for others

Keep the volume at a moderate level. This will allow you to hear outside sounds and to be considerate of the people around you.

On moisture condensation

If the unit is brought directly from a cold to a warm location, moisture may condense inside the unit. In this condition, the tape may adhere to the head drum and be damaged, or the unit may not operate correctly. Always remove the cassette tape when the unit is not being used.

If you have any questions or problems concerning your recorder, please consult your nearest Sony dealer.

To prevent accidental erasure

After recording, push the red tab on the side of the tape you want to protect using a pointed object. If you try to record with the tab pushed down, "PROTECT" appears in the display and the recorder does not enter the recording mode.

To record over the previous recording, push the white tab on the opposite side of the cassette with a pointed object (page 33).

Maintenance

Cleaning the tape head

Prolonged operation will cause contamination of the tape head. To result in the best possible recording and playback, we recommend cleaning the tape head periodically (after a 10-hour run), using the Sony NTC-10CL cleaning cassette (supplied).
If the recorder was not used for a long time, clean the tape head before operation.

How to use the cleaning cassette

1 Insert the cleaning cassette as you do with an NT cassette tape.
2 Set DIR MODE to ⇄.
3 Press ◀▶. About 15 seconds later, press ■.
4 Remove the cleaning cassette without rewinding it.

Proceed with recording and playback with a regular NT cassette tape to check the sound quality.

Notes on the cleaning cassette

- The cleaning cassette cannot be used for recording and playback.
- Do not clean the tape head with the cleaning cassette more than five times continuously.
  Cleaning the tape head continuously for too long a period of time may cause wear to the tape head.
- Do not rewind the cleaning cassette each time you use it. When the cleaning cassette tape is taken up completely, turn it over and use the other side.

Cleaning the cabinet

Clean the cabinet, panels, and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

On the tape shield of an NT cassette tape

The NT cassette tape has a tape shield to prevent dust from entering the tape. The tape shield opens and closes automatically when inserted and removed. Do not force the tape shield open or touch the tape inside.

Troubleshooting Guide

If you experience any of the following difficulties while using your recorder, use this troubleshooting guide to help you remedy the problem.

Symptom	Cause and remedy
The cassette holder cannot be closed.	The cassette tape is not inserted properly.
• The recorder does not work though a certain button is pressed. • The tape does not move. • No indication appears in the display.	• The battery is weak. → Replace the battery with a new one. • The power source is connected incorrectly. • Hold function works. → Slide back HOLD in the opposite direction of the arrow.
Recording cannot be done.	• Connection is incorrect. • Recording level is set at minimum (while manual recording). • The cassette is record-protected. (The red tab on the cassette tape is pushed down.) → Push the white tab on the opposite side of the cassette with a pointed object. When the red tab is visible on the side you want to record on, recording can be done.
Sound is not heard at all.	• Connection is incorrect. • The volume is set at minimum. → Adjust the volume pressing +.
Sound volume cannot be increased.	• AVLS is on. → Set the AVLS switch on the remote controller to OFF.
Increase of noise or deterioration of sound.	• The recorder is placed near noise sources such as a TV set. → Place the recorder away from noise sources. • The tape head is not clean. → Clean the head using the cleaning tape.
The clock does not keep good time.	The lithium battery is weak. → Replace it with a new one.
Correct date and time are not recorded on the tape.	The date and time have not been set. → Set the date and time.
The cassette tape cannot be ejected.	The power source is disconnected while operating. → Connect the power source, press the ■ button, and slide the EJECT switch.
BASS BOOST feature does not work.	• A cord has been connected to the LINE OUT jack. → Remove the cord.

Specifications

General

Format	NT format
Tape	Digital micro tape (NT cassette tape)
Recording system	Helical scan 2 heads, digital recording
Recording head	4 heads
Recording time	60 minutes (with the supplied NTC-60)
Tape speed	Approx. 6.35 mm/s
Drum rotation	Approx. 3000 rpm
Error correction	Cross-interleaving code
Track pitch	Approx. 9.8 µm
Sampling frequency	32 kHz
Modulation system	LDM-2
Number of channels	2-channel, stereo
Quantization	12-bit non-linear (equivalent to 17 – bit)
Frequency response	10 Hz to 15,000 Hz (+1, –3dB)
Signal-to-noise ratio	More than 80 dB (1 kHz, IHF-A, 20 kHz LPF, LINE IN)
Dynamic range	More than 80 dB (1 kHz, IHF-A, 20 kHz LPF, LINE IN)
Total harmonic distortion	Less than 0.08%
Wow and flutter	Below measurable limit (less than 0.001% W.PEAK)

Input

	Jack type	Rated input level	Minimum input level
MIC	stereo minijack	1.38 mV	0.55 mV
LINE IN	stereo minijack	160 mV	64 mV

Output

	Jack type	Rated output level	Maximum output level	Load impedance
HEADPHONES	stereo minijack	—	5 mW + 5 mW	16 ohms
LINE OUT	stereo minijack	160 mV	—	47 kohms

General

Power requirements	DC 1.5 V Size AA (LR6) battery or AC power adaptor
Battery life	Approx. 5 hours (consecutive recording) Approx. 3 hours (consecutive playback) (Sony alkaline battery LR6 (SG))
Lithium battery life	Approx. 1 year
Power consumption	Approx. 300 mW
Dimensions	Approx. 112.8 × 22 × 63mm (w/h/d) (4 1/2 × 7/8 × 2 1/2 inches) including projecting parts
Mass	Approx. 155 g (5.1 oz) Approx. 210 g (7.4 oz) (including the headphones, Sony alkaline battery LR6(SG), and an NT cassette tape NTC-60)

Supplied accessories

Lithium battery CR1220 (1)
AC power adaptor AC-NT2 (1)
Line cable (phono plug × 2 — stereo miniplug, stereo for line input and outputs) (1)
Stereo microphone (1)
NT cassette tape NTC-60 (1)
Cleaning cassette NTC-10CL (1)
Stereo headphones with remote controller (1)
Carrying case (1)

Design and specifications are subject to change without notice.

→ Specifications

Commercially available accessories

NT cassette tape (not recorded): NTC-60 (60 minutes), NTC-90 (90 minutes), NTC-120 (120 minutes)
Stereo panoramic microphone ECM-909A
Tie-pin type stereo microphone ECM-TS120
Car battery cord DCC-E215HG, DCC-E215
Car connecting pack CPA-8
Active speakers SRS-A91, SRS-A60
Cleaning cassette NTC-10CL

Your dealer may not handle some of the above listed accessories. Please ask the dealer for detailed information how to order these accessories from Sony.

What is the NT (Non-Tracking) format?

The NT format is the digital audio tape format which employs stamp-size cassette tapes and is intended as one of the next generation tape recorders. The major benefits of this NT format are:

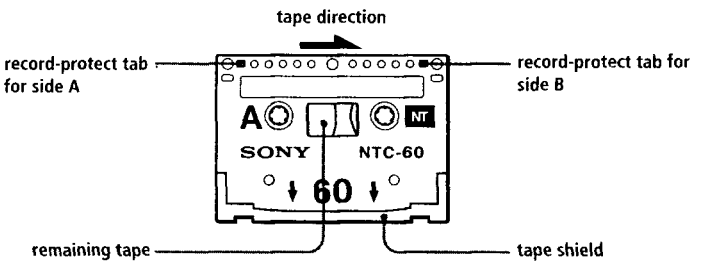
- Pocketable size
- Digital Hi-Fi stereo sound
- Long battery life with one SizeAA (LR6) battery
- Easy operation

Stamp-size cassette tapes

The size of the NT cassette made possible a tape recorder small enough to keep in your pocket. Storing cassette tapes is no longer a problem either. Furthermore, you can obtain digital quality recording and playback of up to 2 hours with NTC-120 cassette.

Preparing an NT cassette tape

You can record on and play both sides of the NT cassette tape. The supplied NT cassette tape (NTC-60) offers you 60 minutes of recording and playing (30 minutes on each side).



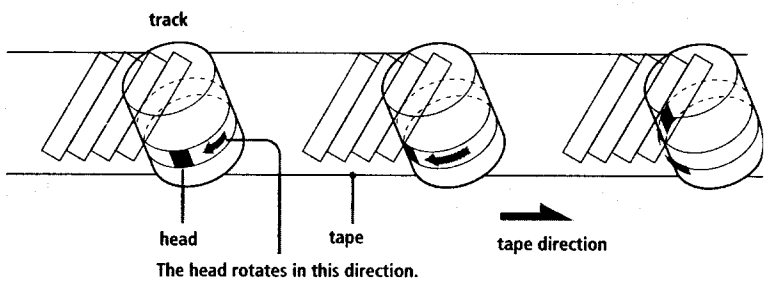
NT cassette tape specifications

Cassette size	30 × 21.5 × 5 mm (w/h/d) ($1\,^3/_{16} \times ^7/_8 \times ^7/_{32}$ inches)
Mass	2.3 g (0.08 oz)
Tape width	2.5 mm
Material	Metal evaporated tape
Maximum recording time	120 minutes (double side)

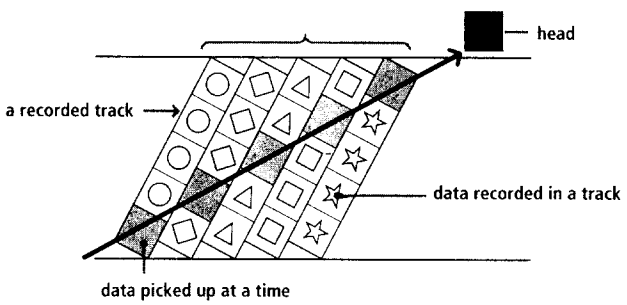
→ What is the NT (Non-Tracking) format?

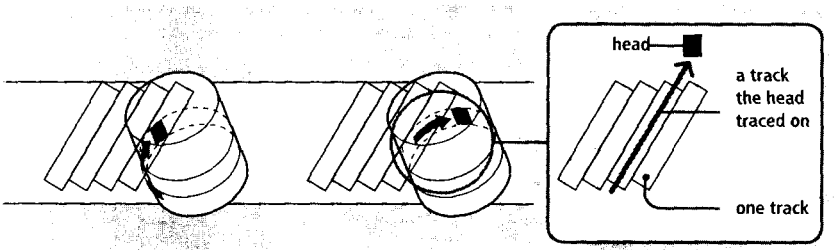
The Non-Tracking format

With the conventional helical scan system of tape tracking, a rotary head must precisely trace each recorded track of the tape during playback. This tracking method requires highly precise mechanical components, which makes it difficult to reduce the size of the recorder.



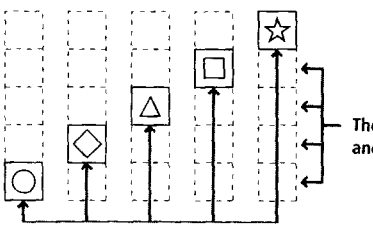
On the other hand, with the NT (Non-Tracking) format, a rotary head is not required to precisely trace the recorded track during playback. Therefore, the number of mechanical parts has been reduced. And this makes the compact size of the recorder possible.
Instead of tracing each track one by one, the rotary head reads several tracks at a time.





The head precisely traces tracks one by one.

The data picked up may be disconnected or fragmented. However, the IC memory rearranges and augments the data and accurately reproduces the original sound.

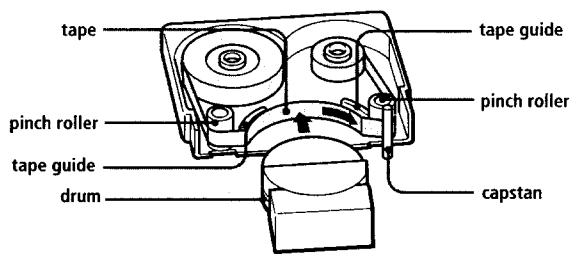


The data picked up have been rearranged.

→ What is the NT (Non-Tracking) format?

Non-Loading method

The conventional helical scan system uses a loading mechanism that needs to draw out the tape from a cassette and wrap it around a rotary drum. This loading mechanism increases the complexity of the mechanism in a recorder. On the other hand, with the Non-Loading method, plastic tape guides are molded in an NT cassette to fit a rotary drum in the cassette. The rotary drum is just pushed against the tape guides and the tape wraps around the drum automatically. This method has made a loading mechanism unnecessary.

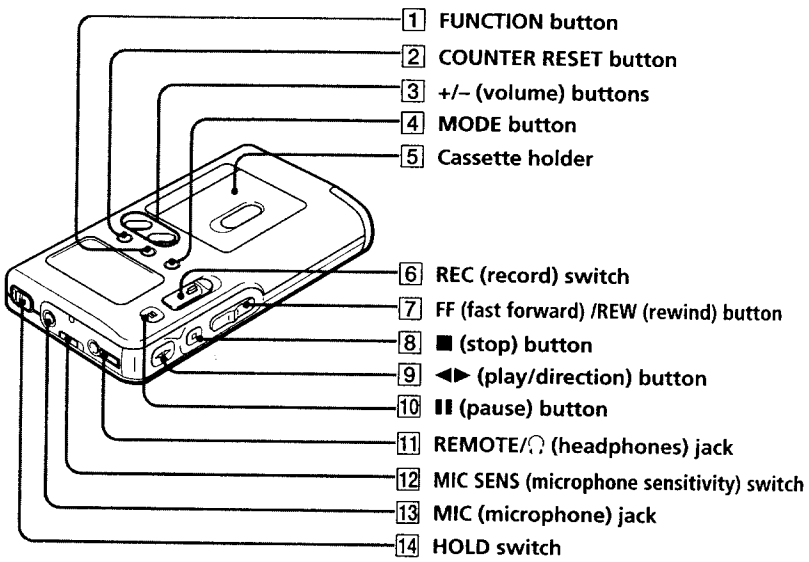


Memory reverse function

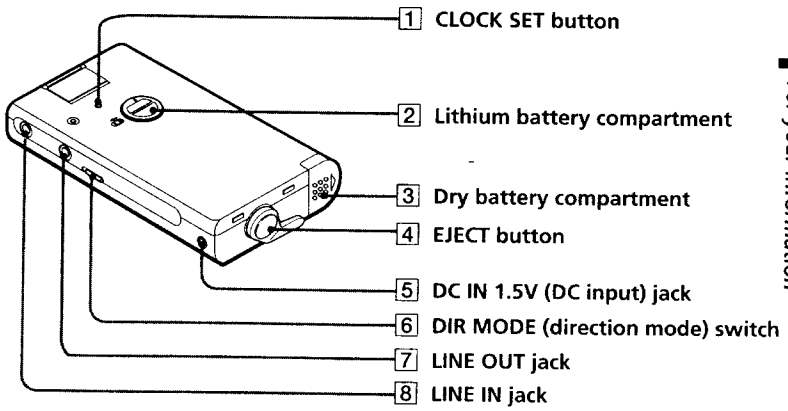
One of the features of this recorder NT-2 is the auto-reverse function. You can record or play both sides of a cassette continuously without turning the cassette over. Moreover, when the continuous recording has been made on both sides (from FWD to REV), you never experience any muting of the playback sound. The buffer memory stores audio data to realize continuous recording/playback on both sides of a cassette tape (memory reverse function).

Looking at the controls

The recorder


1 FUNCTION button
2 COUNTER RESET button
3 +/– (volume) buttons
4 MODE button
5 Cassette holder
6 REC (record) switch
7 FF (fast forward) /REW (rewind) button
8 ■ (stop) button
9 ◄► (play/direction) button
10 ▮▮ (pause) button
11 REMOTE/∩ (headphones) jack
12 MIC SENS (microphone sensitivity) switch
13 MIC (microphone) jack
14 HOLD switch

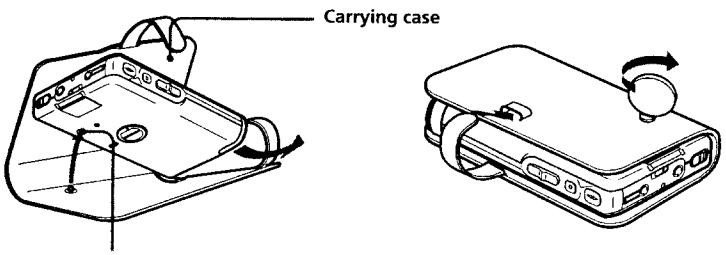
Rear of the recorder


1 CLOCK SET button
2 Lithium battery compartment
3 Dry battery compartment
4 EJECT button
5 DC IN 1.5V (DC input) jack
6 DIR MODE (direction mode) switch
7 LINE OUT jack
8 LINE IN jack

→ Looking at the controls

How to attach the carring case

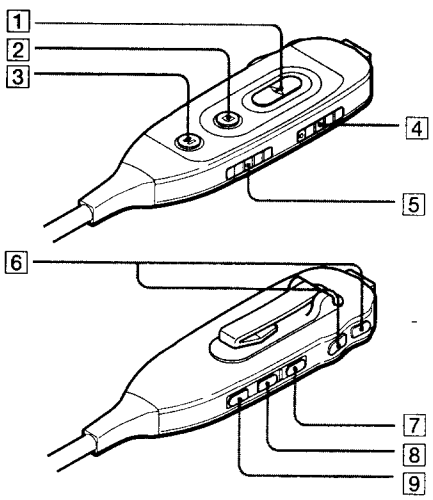
Fit the screw on the carring case to the hole on the recorder and fasten the screw.



Note

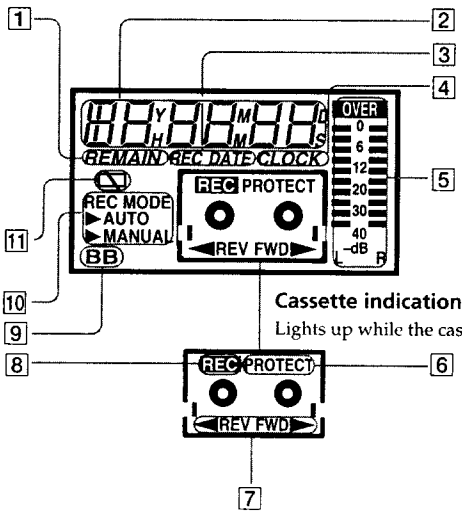
To avoid damage to the carring case, do not leave the headphones cord wound round the case.

The remote controller



1. ◄► (play/direction) button
2. ■ (stop) button
3. ❚❚ (pause) button
4. HOLD switch
5. AVLS switch
6. +/– (volume) buttons
7. BB (BASS BOOST) button
8. FF (fast-forward) button
9. REW (rewind) button

The display window



Cassette indication
Lights up while the cassette is inserted.

1 **REMAIN indication**
Shows that the remaining time of the tape (of one side) is less than about 4 minutes. (page 14)

2 **Counter**
Displays the tape counter, the current date and time, and the date and time the recording was made. Also displays the character information such as "PAUSE", etc.

3 **REC DATE (recorded date) indication**
Lights up along with the date and time the recording was made.

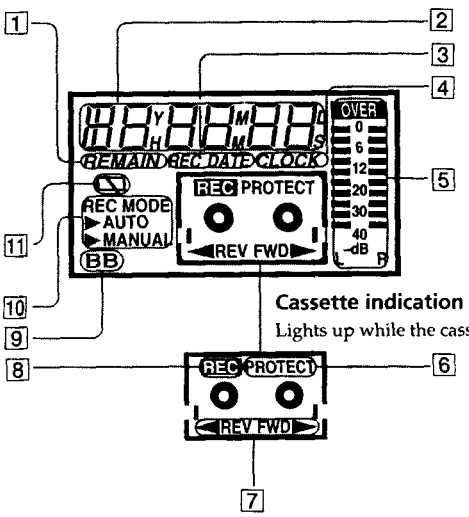
4 **CLOCK indication**
Lights up along with the time indication.

5 **Level meter**
Shows the record level while recording, and the playback level while playing.

6 **PROTECT indication**
Shows the cassette is record-protected. (page 14)

7 **Tape direction indication**
FWD► (forward), ◄REV (reverse)

→ Looking at the controls



Cassette indication
Lights up while the cassette is inserted.

8 REC (record) indication
Lights up while recording.

9 BB (BASS BOOST) indication
Lights up when low frequency (bass) sound is emphasized.

10 REC MODE (recording mode) indication
Shows the recording level is adjusted automatically ("AUTO") or manually ("MANUAL").

11 (battery) indication
Flashes when the dry battery is weak.

Printed in Japan